REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks is respectfully requested.

By this Amendment, Fig. 1 is amended, the specification is amended, and claims 2-9 are amended. Furthermore, claim 1 is canceled and new claim 10 is added. Accordingly, claims 2-10 are pending in this application. No new matter is presented in this Amendment.

Objections to the Specifiation

The Patent and Trademark Office (PTO) objects to the disclosure for informalities. The specification is replaced with a substitute specification to replace the term "installation" with the term "device," and the phrase "useful-data field" with the phrase "payload-data field." In addition, the Abstract is amended accordingly.

The specification is further amended to clarify the use of the term "dichotomy search" based upon the normal meaning of the term dichotomy derived from Greek *dichotomia* "a cutting in half" from *dicha* "in two" + *temnein* "to cut" (*see* Online Etymology Dictionary,© 2001 Douglas Harper). Accordingly, as indicated above, no new matter is presented in this Amendment.

The disclosure is further objected to for not being in the preferred format. Applicants respectfully traverse this objection based upon the Preliminary Amendment filed September 10, 2004.

Based upon the above, withdrawal of the objection to the disclosure is respectfully requested.

Objections to the Drawings

The PTO objects to Fig. 1 as not being in compliance with 37 CFR §1.121(d) for improper labeling. Fig. 1 is amended to replace the labels "Installation I" and "Installation II" with the labels "Device I" and "Device II," to be consistent with the specification, as amended above. Accordingly, withdrawal of the objection to the drawings is respectfully requested.

Objections to the Claims

Claims 1-2, 7, and 9 are objected to because of informalities. The objections to claim 1 are rendered moot by the cancellation of claim 1.

Regarding claim 2, the objection to the phrase "dichotomy procedure" is obviated by the clarification of the term "dichotomy" in the specification.

Regarding claims 7 and 9, Applicants respectfully submit that the replacement of the term "installation" with the term "device," obviates the objection thereto. Accordingly, withdrawal of the objection to the claims is respectfully requested.

Claims Rejections Under 35 USC §101

The rejection of claims 1-9 under 35 USC §101 is respectfully traversed based upon the cancellation of independent claim 1, the addition of new apparatus claim 10, and the amending of claims 2-9 to correct claim dependencies. Applicants respectfully submit that, as amended, apparatus claims 1-9 are directed to statutory subject matter. Withdrawal of this rejection is respectfully requested.

Claims Rejections Under 35 USC §112

Claims 1-9 are rejected under 35 USC §112, second paragraph. Specifically, independent claim 1 is rejected, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2-9 are rejected as being dependent upon claim 1.

Applicants respectfully traverse this rejection based upon the cancellation of claim 1, and the amending of claims 2-9 to depend from new independent claim 10. Withdrawal of the rejection is respectfully requested.

Claims Rejections Under 35 USC §103

The rejection of claims 1-9 under 35 USC §103(a) as being unpatentable over U.S. Patent 5,938,736 to Muller et al. ("Muller") in view of Stevens, is respectfully traversed based upon the amendment to the claims and the following remarks. Specifically, claim 1 is canceled and new apparatus claim 10, from which claims 2-9 depend,

Claims 10 and 2-4 recite, *inter alia*, a device linked with a data packet transmission network, the device complying with three level of protocol. The device comprises means for selecting and sorting data packets, delivered by the network. The device matches destination addresses in service information fields of the received packet with addresses of the device. More precisely, the recited means for selecting and sorting data packet share the addressing information related to the device and appearing in the service information fields of a multi-protocol data packet between two linked directories: a lower level address directory and a higher level address directory.

The lower level address directory gives access to the higher level address directory by means of compatibility links and the higher level address directory gives access to the equipment reception ports by means of assignment links.

Muller appears to only describe a multi-layer switch search engine architecture

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for a data packet transmission network with a packet header processing unit and a forwarding database memory. The packet header processing unit analyzes the header of the received packet to construct a search key for accessing the forwarding database memory. The search engine matches the search key or parts of the search key with the elements of the forwarding database memory to find a forwarding decision.

As it can be seen from Fig. 6, Muller appears to teach organizing the forwarding database in two parts constituted of two cascaded fully associative content addressable memories (CAM 610, 611), storing the L2 and L3 entries together. Applicants respectfully submit however, that these two memories are addressed in parallel and do not have any link between them allowing one to give an access to the other.

Applicants further submit that based upon Muller's disclosure of addressable memories (CAM) addressed in parallel, Muller appears to only suggest, at column 11, lines 61-67, that the forwarding database can be constituted by a single addressable memory or can be cut in more than two addressable memories. Nowhere does Muller disclose, teach, or suggest the specific features recited in claim 10.

Furthermore, Muller appears to teach, at column 13, line 25 to column 14, line 62, different match tests, based upon on a search key, in order to retrieve a forward decision in the forwarding database. However, nowhere does Muller suggest organizing the storage of the addressing information related to the equipment, the addressing information appearing in the service information fields of a multi-protocol data packet equipment between two linked directories, as recited by the Applicants. Applicants respectfully submit that the achieved benefits include the regrouping of the different match tests in two successive operations in order to minimize the needed computational capacity (see paragraphs [0018] and [0086] of the specification).

Furthermore, regarding claim 2, Applicants respectfully submit that Muller fails to suggest a dichotomy procedure because a dichotomy procedure only contains divisions or forkings into two branches. The flowcharts illustrated in Figs. 7A, 7B, 8A, 8B, 8C, 9, of Muller fail to disclose, teach, or suggest this feature.

The PTO acknowledges that Muller fails to disclose multi-level protocol identifiers

on the partitioned packet and the explicit identification of incoming packet fragments not having any destination address information, and relies upon Stevens to remedy the deficiencies of Muller.

Notwithstanding the disclosure of a frame format of a data packet according to the 802 IEEE encapsulation protocol, Stevens fails to describe any multi-protocol data switch equipment. Applicants respectfully submit, therefore, that combining the protocol of Stevens with Muller's switch search engine to render obvious with the equipment, as recited in amended claims 10, and 2-4 is improper. For example, Muller together with Stevens may only suggest a content for a directory the existence of which they ignore.

Applicants respectfully submit that the claims are patentable not only due to the failure of Muller in view of Stevens to disclose, teach or motivate all recited features of the claims, but are also patentable based upon the improper combination of Muller and Stevens.

Amended claims 5-9 depend from independent claim 10 and are likewise patentable over the applied art for at least their dependence on claims 10, an allowable base claim, as well as for the additional features they recite.

For example, regarding the Ethernet packets recited in claim 7, Muller appears, at column 4, lines 5-18, to teach that the network switch element may include one or more internal links for interconnecting switching elements to create a larger switch. This does not signify that the switch move Ethernet packet between several Ethernet networks but only that it is possible to create a switch of any size by interconnecting a plurality of switching elements.

Accordingly, withdrawal of this rejection is respectfully requested.

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

Early issuance of a Notice of Allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicants' attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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